

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: LUMARK

Report Number: P270487

Luminaire Tested: **NAV-AF-04-D-UNV-5NQ-7027-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270487  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-04-D-UNV-5NQ-7027-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 17604.9 lumens  
Efficiency: N/A  
Efficacy: 103.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B4 - U0 - G2

Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

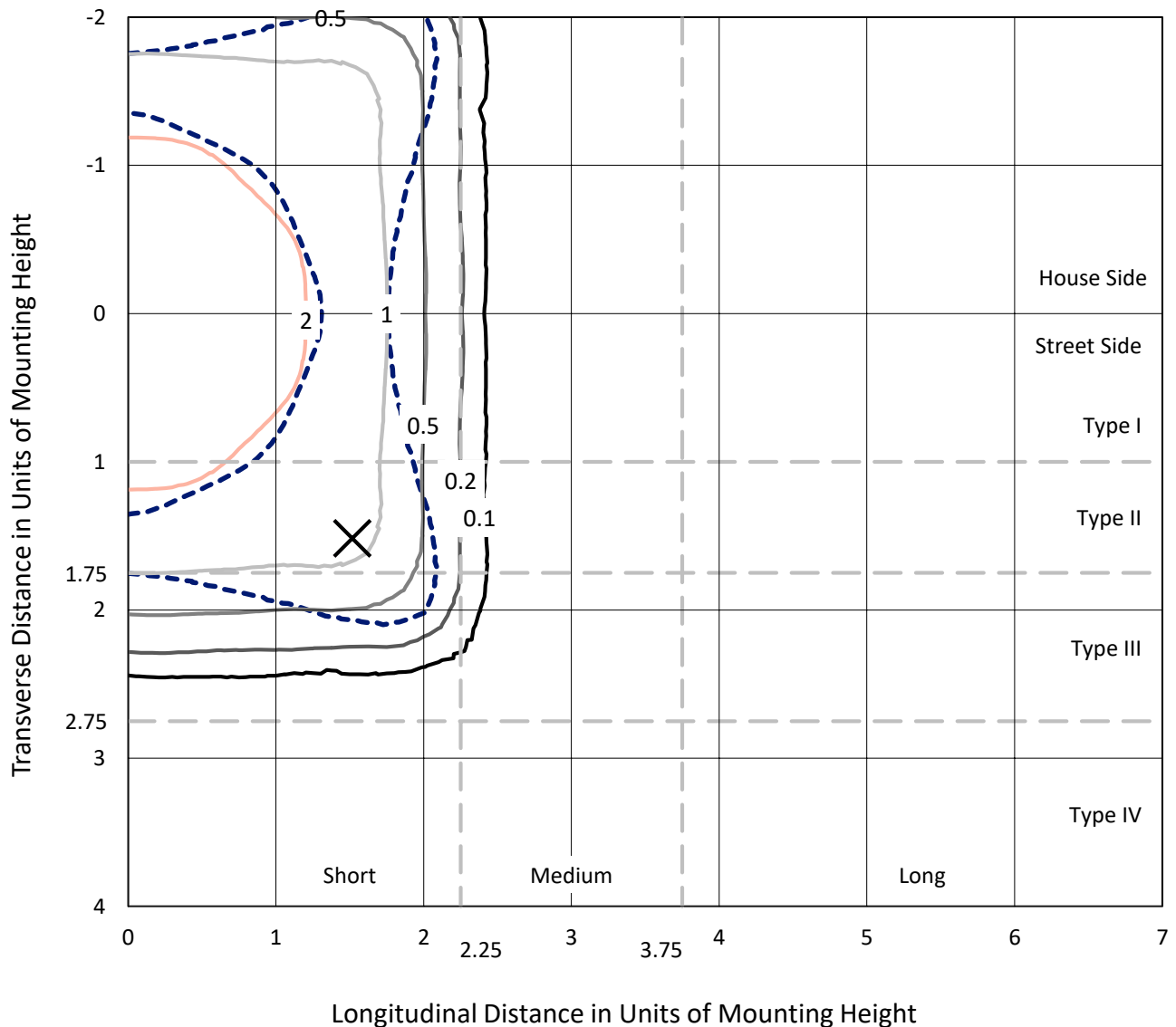


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### Iso-Footcandle Lines of Horizontal Illumination

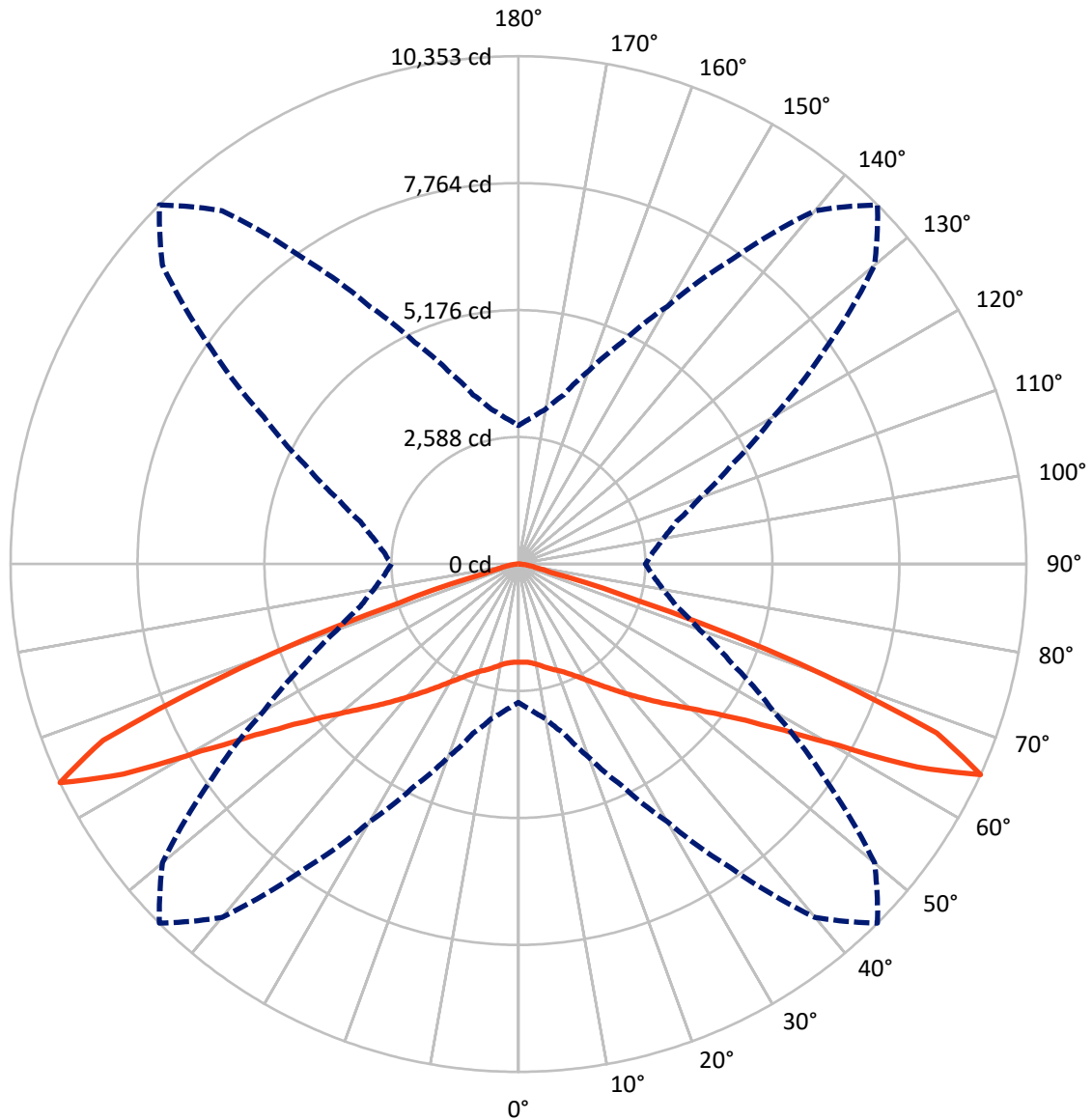
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	8802.4	0.0	8802.4
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	8802.4	0.0	8802.4
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	17604.9	0.0	17604.9
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	195.0	1.1
10°-20°	625.0	3.6
20°-30°	1165.9	6.6
30°-40°	1965.9	11.2
40°-50°	3193.3	18.1
50°-60°	5003.3	28.4
60°-70°	4722.9	26.8
70°-80°	636.5	3.6
80°-90°	97.0	0.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	17604.9	100.0
0°-180°	17604.9	100.0

**Coefficient of Utilization**



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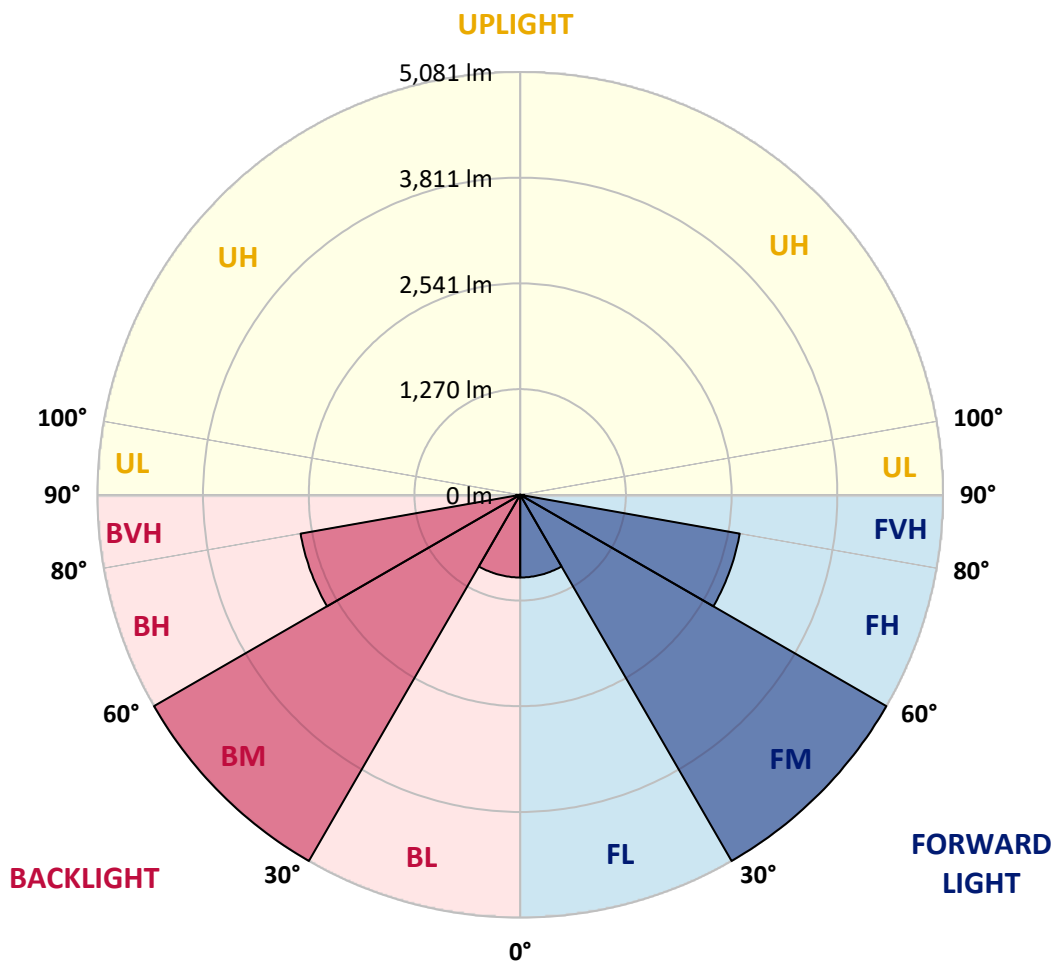
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	993.0	5.6			
FM (30°-60°)	5081.3	28.9			
FH (60°-80°)	2679.7	15.2			G2/5000
FVH (80°-90°)	48.5	0.3			G1/100
BL (0°-30°)	993.0	5.6	B2/1000		
BM (30°-60°)	5081.3	28.9	B4/8500		
BH (60°-80°)	2679.7	15.2	B4/5000		G2/5000
BVH (80°-90°)	48.5	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G2**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2002.5	2002.5	2002.5	2002.5	2002.5	2002.5	2002.5	2002.5	2002.5	2002.5	2002.5
2.5°	2019.0	2019.0	2022.3	2021.1	2016.8	2013.6	2010.1	2005.8	2003.6	2001.5	2000.3
5°	2029.9	2029.9	2033.3	2032.1	2028.8	2024.5	2022.3	2019.0	2015.6	2013.6	2014.5
7.5°	2057.4	2058.5	2059.5	2058.5	2055.1	2051.9	2047.4	2046.3	2041.9	2038.8	2040.9
10°	2099.0	2099.0	2100.1	2101.2	2099.0	2091.3	2091.3	2089.2	2084.7	2080.4	2081.6
12.5°	2145.2	2145.2	2146.2	2146.2	2146.2	2141.7	2142.8	2141.7	2136.3	2134.2	2136.3
15°	2190.1	2191.1	2191.1	2193.3	2193.3	2194.5	2198.8	2198.8	2196.6	2195.5	2195.5
17.5°	2242.7	2245.0	2246.0	2249.3	2250.3	2252.6	2256.9	2258.1	2259.1	2255.9	2256.9
20°	2312.9	2313.9	2317.3	2318.3	2322.7	2322.7	2325.0	2323.8	2321.7	2317.3	2317.3
22.5°	2391.8	2394.1	2400.6	2400.6	2406.1	2402.8	2404.0	2400.6	2395.2	2392.9	2390.7
25°	2495.0	2498.2	2503.7	2501.5	2503.7	2498.2	2498.2	2498.2	2495.0	2491.7	2490.6
27.5°	2625.4	2619.9	2625.4	2621.1	2619.9	2615.5	2616.7	2614.4	2611.3	2610.0	2605.8
30°	2761.4	2754.8	2758.2	2759.2	2757.1	2755.9	2751.6	2748.3	2742.7	2744.0	2740.5
32.5°	2917.2	2910.6	2913.8	2915.0	2912.8	2915.0	2913.8	2906.1	2899.5	2904.0	2904.0
35°	3102.4	3098.2	3106.9	3110.2	3103.6	3100.3	3095.9	3087.1	3077.2	3083.8	3085.0
37.5°	3325.2	3319.6	3326.2	3335.0	3322.9	3316.4	3298.8	3285.6	3279.1	3282.3	3286.7
40°	3556.5	3557.6	3576.2	3578.5	3565.4	3557.6	3540.1	3520.3	3501.8	3501.8	3507.2
42.5°	3800.0	3803.2	3825.3	3832.9	3828.4	3814.3	3790.0	3766.0	3741.9	3746.2	3752.8
45°	4075.3	4070.8	4093.8	4112.5	4109.2	4104.9	4081.8	4037.9	4016.1	4015.0	4025.9
47.5°	4364.8	4373.6	4397.7	4429.5	4428.4	4417.4	4387.9	4347.2	4306.7	4310.0	4323.2
50°	4702.5	4714.7	4755.2	4787.0	4791.4	4788.1	4753.0	4705.9	4648.8	4652.1	4669.6
52.5°	5005.3	5022.8	5069.9	5135.7	5176.4	5195.0	5171.9	5128.1	5069.9	5073.2	5091.9
55°	5279.3	5306.7	5377.1	5466.9	5548.1	5623.7	5657.7	5656.6	5613.9	5623.7	5647.9
57.5°	5451.5	5489.9	5596.4	5741.1	5902.4	6054.8	6186.4	6310.2	6337.7	6389.3	6389.3
60°	5220.2	5310.2	5451.5	5699.4	6016.4	6358.6	6729.3	7090.1	7322.5	7505.7	7407.0
62.5°	4359.3	4492.0	4690.5	5017.4	5510.8	6121.6	6866.3	7705.2	8580.4	9115.6	8722.9
65°	2820.7	2987.4	3203.4	3570.8	4192.6	4978.9	6063.5	7571.5	9402.9	10352.5	9475.3
67.5°	1117.5	1230.5	1362.1	1623.1	2162.6	2934.8	4152.1	6011.9	8302.9	9199.0	8215.2
70°	534.1	552.7	578.0	633.8	768.8	1037.5	1668.1	2962.2	5091.9	6036.2	4970.1
72.5°	386.0	389.3	401.5	420.0	459.6	514.3	625.1	905.9	1755.7	2553.1	1758.0
75°	292.8	297.2	303.7	313.7	334.4	360.8	402.5	482.5	601.0	693.1	599.9
77.5°	222.6	227.0	232.5	242.4	253.3	271.9	287.4	319.2	369.7	389.3	387.1
80°	162.4	170.0	178.8	187.6	195.2	203.9	205.1	220.4	248.9	267.5	262.1
82.5°	103.0	109.7	132.7	142.7	143.6	145.9	144.7	145.9	161.2	174.5	170.0
85°	65.8	70.2	82.3	93.2	91.0	95.4	95.4	93.2	86.6	74.6	88.8
87.5°	32.9	34.0	39.4	49.3	47.2	41.7	40.6	40.6	29.6	25.2	27.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2002.5	2002.5	2002.5	2002.5	2002.5	2002.5	2002.5	2002.5
2.5°	1997.0	1999.3	1995.9	1995.9	1994.9	1997.0	1993.8	1993.8
5°	2012.5	2015.6	2014.5	2014.5	2016.8	2019.0	2018.0	2016.8
7.5°	2039.8	2041.9	2044.3	2045.4	2047.4	2046.3	2048.6	2047.4
10°	2081.6	2079.2	2082.6	2079.2	2080.4	2078.1	2079.2	2079.2
12.5°	2134.2	2130.8	2128.7	2126.5	2126.5	2122.1	2122.1	2123.1
15°	2194.5	2189.0	2184.6	2182.4	2180.1	2180.1	2177.0	2179.1
17.5°	2253.7	2248.2	2240.6	2240.6	2237.1	2235.1	2232.8	2238.2
20°	2316.2	2310.7	2306.3	2305.2	2298.7	2296.4	2297.5	2304.2
22.5°	2388.6	2385.3	2385.3	2383.1	2378.7	2375.4	2375.4	2383.1
25°	2486.1	2479.6	2480.7	2481.7	2479.6	2479.6	2477.3	2482.8
27.5°	2605.8	2600.2	2603.5	2605.8	2603.5	2606.8	2603.5	2607.9
30°	2746.1	2742.7	2746.1	2749.4	2744.0	2744.0	2741.6	2745.0
32.5°	2913.8	2909.5	2911.6	2911.6	2904.0	2897.5	2888.6	2895.1
35°	3098.2	3092.7	3096.9	3100.3	3091.5	3085.0	3071.8	3077.2
37.5°	3301.0	3303.2	3308.6	3322.9	3320.8	3309.7	3300.0	3304.2
40°	3528.1	3539.0	3563.0	3573.0	3570.8	3559.9	3546.7	3548.8
42.5°	3784.6	3798.9	3824.2	3840.6	3832.9	3817.5	3801.1	3807.6
45°	4064.3	4086.2	4119.1	4135.5	4125.6	4109.2	4086.2	4098.2
47.5°	4360.5	4404.2	4448.0	4470.1	4466.7	4443.7	4414.1	4417.4
50°	4714.7	4772.8	4828.7	4850.6	4834.1	4799.0	4757.3	4756.3
52.5°	5155.5	5218.0	5264.1	5258.6	5218.0	5163.2	5115.9	5113.8
55°	5706.0	5726.9	5720.2	5673.1	5601.8	5516.3	5455.9	5446.1
57.5°	6371.7	6301.5	6198.5	6055.8	5895.8	5733.4	5623.7	5583.1
60°	7185.5	6868.5	6500.0	6111.8	5757.5	5492.1	5324.3	5222.3
62.5°	7857.7	6939.8	6116.2	5441.8	4890.1	4562.1	4333.0	4191.5
65°	7627.4	5995.5	4802.3	3932.7	3330.6	2991.7	2749.4	2588.1
67.5°	5892.4	4006.1	2787.7	1932.3	1465.1	1240.3	1083.5	981.5
70°	2970.9	1536.5	931.1	656.9	561.5	522.0	495.7	480.4
72.5°	871.9	582.3	483.6	427.8	393.6	369.7	354.2	346.6
75°	482.5	393.6	347.6	315.8	293.9	277.4	267.5	261.0
77.5°	332.4	286.2	263.3	242.4	224.8	212.8	205.1	198.4
80°	232.5	209.5	199.7	188.6	175.4	165.6	154.6	150.2
82.5°	154.6	144.7	142.7	133.8	126.1	115.2	95.4	88.8
85°	91.0	89.9	89.9	86.6	81.1	71.2	57.0	57.0
87.5°	31.8	32.9	34.0	36.2	35.2	29.6	24.2	23.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)